disons *Sphæriaceæ*, *Mucedineæ*, *Hydneæ*, etc., nous devrons necessairement dire aussi: *Pyrenomyceteæ*, *Hyphomyceteæ*, *Hymenomyceteæ* et non *Pyrenomycetes*, *Hyphomycetes*, *Hymenomycetes* comme voudraient beaucoup d' auteurs.

8. Les couleurs des plantes et particulièrement celles des corolles, des Champignons, des spores etc., sont souvent décrites avec des noms de signification incertaine. Il serait bien d' employer une nomenclature définе appuyée à des échantillons normales. Je vais publier à cet effet une *chromotaxie* qui sera, je l' espére, de grande utilité.

9. Pour ce qui concerne la nomenclature des fruits et des spores des Champignons, il serait utile d'employer seulement la suivante, qui au reste est adoptèe par la plupart des mycologues:

Hymenomyceteæ: Pileus (quelle forme qu'il soit) ; basidia; sterigmata; sporæ; cystidia.

Gasteromyceteæ et *Myxomyceteae:* Peridium; gleba; capillitium; flocci; sporæ.

Uredineae: Sorus; uredosporae; teleutosporæ; mesosporae; pseudoperidium; æcidiosporæ; paraphyses.

Ustilagineae: Sorus; sporæ.

Phycomyceteae: Oogonia; oosporæ; antheridia; spermatia; zygosporæ; azygosporæ; zoosporangia; zoosporæ.

Pyrenomyceteae et *Phymatosphaeriaceae:* Stroma; perithecium; loculi; ascus; sporidia; paraphyses.

Discomyceteae et *Tuberoideae*: Ascoma; gleba; ascus; sporidia; paraphyses.

Schizomyceteae: Filamenta; baculi; cocci; endosporæ; arthrosporæ.

Sphaeropsidae: Perithecium; basidia; sporulæ.

Melanconieae: Acervulus; basidia; conidia (et non *gonidia*, nom qui doit être reservé aux Lichens).

Hyphomyceteae: Caespitulus; sporodochium; hyphae; sporae.

Obs.: Si la spore germe, il se forme le promycelium qui généralement produit les sporidiola.— P. A. Saccardo, *Padua, Italy.*

NOTES AND NEWS.

Prof. Maximowicz, of St. Petersburg, well known to all students of systematic botany, died February 16.

M. Marcel Brandza is publishing in *Revue générale de Botanique*, an exhaustive paper on the development of the seed coats.

In *Le Botaniste* (Feb. 25) M. P. A. Dangeard has a valuable illustrated paper on the morphology and anatomy of *Tmesipteris.*

The report of the mycologist, Dr. Roland Thaxter, to the Connecticut experiment station for the year 1890, is devoted to an extended account of the deep scab of potatoes and the organism that produces it, notes on several other plant diseases, and an excellent account fo certain fungicides and methods for their application.

UNDER THE EDITORSHIP of Prof. L. H. Bailey, the *American Garden* has become the sprightliest and most readable of the journals of its class.

THE FIRST BULLETIN of the Agricultural Experiment Station of North Dakota deals with grain smuts, a contribution by the Botanist, Mr. H. L. Bolley.

IN THE first of the Beihefte zum Botanisches Centralblatt F. Ludwig gives a résumé of the papers appearing during 1890 on the relation between plants and snails.

PROFESSOR JOHN M. COULTER has been elected President of the State University of Indiana, and will enter upon his duties at Bloomington next September.

IN *Journal of Botany* (March), Mr. T. D. A. Cockerell gives some account of the conspicuous European weeds that have become naturalized in the United States.

A POPULAR volume by M. C. Cooke, on the subject of edible fungi, will be issued shortly. It will be of a moderate size and price, and will contain colored plates of forty-four edible species.

M. A. LOTHELIER has shown by experiments that plants like Berberis or Hawthorn produce spines more freely in direct proportion to the degree in which they are exposed to the light.— *Gard. Chron.*

DR. EDWARD PALMER has recently returned from a three months collecting trip at Manzanilla and Colima, Mexico, having obtained about 500 species. These species will be reported upon by the botanists of the Department of Agriculture.

IN AN account in the *Botaniska Notiser* of European Uredineæ occurring at Quito, J. G. Lagerheim describes a new parasite of Puccinia graminis, which he calls *Fusarium Uredinis*. It attacks the uredosori, giving them a pinkish color.

IN *American Garden* (March), Mr. Walter Deane gives an interesting and illustrated account of the native orchids of New England. Every species seems to be mentioned and in a very readable way by one who knows them well in their native haunts.

FOUR SPECIES of North American plants have become established in the vicinity of Pavia, Italy, according to M. Bozzi (Atti. Soc. Ital. Sc. Nat., xxxi, p. 281). They are Oxybaphus nyctagineus, Commelina Virginica, Elodea Canadensis and Azolla Caroliniana.

THE SUMMER COURSE in botany at Harvard University will begin at the Botanic Gardens June 29, and continue five weeks. It will be under the instruction of Mr. W. F. Ganong, Instructor in Botany, and Mr. G. F. Pierce, Assistant in Botany, in Harvard University.

DR. DOUGLAS H. CAMPBELL has been appointed Associate Professor of Botany at the new Stanford University of California. As the Pacific slope is already well supplied with workers in systematic botany, that subject will not be represented at present in the new University.

A SORGHUM smut (*Ustilago Reiliana* Kühn) new to the United States is recorded by Messrs. Kellerman and Swingle (Trans. Kans. Acad. Sci., xii, 158), as occuring in Kansas. It attacks the panicle, and reduces it to a more or less uniform mass of spores. In Europe it also attacks the staminal inflorescence of Indian corn.

DR. W. J. BEAL has issued a bulletin (no. 72) describing the six worst weeds of Michigan. They prove to be Cnicus arvensis, Lithospermum arvense, Verbascum Blattaria, Linaria vulgaris, Plantago lanceolata, and Rumex crispus. A sample of the seeds of each is glued upon one of the pages, so that the farmer may intelligently examine his seed before sowing.

IN HIS "Notes on North American Trees," Professor C. S. Sargent has taken up the genus Acer (*Garden and Forest*, April 1). In regard to the confused synonymy of our sugar maple, the author inclines to the use of Michaux's name *A. barbatum*. Following most late authors, he merges Negundo into Acer and uses the Linnæan *Acer Negundo* as the name of our box elder.

WE NOTE with pleasure that Mr. Thomas Meehan, the editor of the *Gardeners' Monthly* until its discontinuance at the death of the publisher, and so long and widely known by his botanical writings, will soon begin the publication, assisted by his sons, of a new journal of gardening and botanical miscellany. It will be known as *Meehan's Monthly*, and the first number will appear July 1.

THE BOTANICAL CLUB of Washington has begun to make arrangements for entertaining the botanists of the A. A. A. S. They are intending among other things to issue a souvenir of about 40 pages, giving some account of the trees and shrubs of the streets and parks, with photographic illustrations. The large number of botanists in Washington will no doubt do all in their power to make a week's stay pleasant for visiting botanists.

MR. GEO. B. SUDWORTH shows in *Garden and Forest* (April 8) that if botanists adhere to the priority of specific name as rigidly as zoologists, that three of our well known plants should be called Negundo Negundo, Sassafras Sassafras, and Catalpa Catalpa. It occurs to us that his point is well taken. These extraordinary combinations seem not to have given zoologists any trouble, as a list of names from Jordan's "Manual of Vertebrates" testifies.

NEARLY ONE-TENTH of the British *Agaricini*, the group of mushrooms and toadstools, are good eating, as we learn from *Grevillea* (xix, 83). There are 1,400 species in the British Isles, of which somewhat over half are too small, rare or tough to be of culinary value. This leaves 680 species that may be edible. Of this number 134 are known to be suitable for the table, some 30 are poisonous, and of the remaining 516, nothing certain is known.

THE POPULAR notion that the sunflowers turn with the sun has been put to the test by W. A. Kellerman, who records (Trans. Kans. Acad. Sci., xii, 140), a large number of observations on the wild Helianthus annuus. He finds that about 87 per cent. of the heads while in bloom

show movement during the day, and a less percentage at night, but they usually turn through only a few degrees of arc. During the day 23 per cent. move somewhat toward the west, and 8 per cent. in the opposite direction. At night 21 per cent. move eastward, and 8 per cent. westward.

ANOTHER considerable contribution has been given by Mr. F. Boergesen in his "Desmidieæ" [1] to the knowledge of this group of Algae from Brazil. The material had been collected by Glaziou in St. Paul, and the number of about 130 species and varieties includes about 50 new ones, illustrated in four plates, finely prepared by the author himself. Of species and varieties enumerated, the largest numbers belong to the genera Cosmarium (29), Staurastrum (24), Closterium and Euastrum (16), Micrasterias (10), etc. The diagnoses are all given in Latin.—T. H.

WE are glad to welcome the first annual Bulletin of the Swiss Botanical Society. It is a volume of nearly 170 pages, with 3 plates, and contains original papers by Dr. H. Christ, Prof. Dr. Cramer, Dr. J. Früh, and Dr. H. Schinz. In addition to this there is an account of communications made to the society, among which we note a revision of *Krameriaceæ* in which *K. lanceolata* Torr. is made var. *angustifolia* of *K. secundiflora* DC. A good feature is an excellent and full résumé of the botanical work done during 1890 which had any reference to the Swiss flora.

THE PRODUCTION of tubercles on the roots of English beans has been accomplished by M. W. Beyerinck (Bot. Zeit., xlviii, 837) by growing the beans in a sterilized soil and applying pure liquid cultures of bacteria. The apparatus employed is of new and ingenious design. The experiments so far completed show that the tubercles on the various leguminous plants are not due to a single species of bacteria, but to several, which are also distinct from the soil bacteria producing nitrification. They also establish the fact that the bacterial growths do not originate within the plants, for the roots remained free of tubercles so long as the cultures of the specific bacteria were not introduced.

AN EARLY collapse of the plan of publishing general Fungi Exsiccati is predicted by M. C. Cooke in the last number of *Grevillea*, on the ground that there are too many being issued with too much duplication, both in the same and in different series. He notes that Puccinia graminis appears under six numbers in one series, and also under six numbers in another series, and both sets by the same collector. Pleospora herbarum appears under eleven numbers in one series, and under eighteen in another. A long list of American species is given, each species of which has been issued in from one to three American series and in as many foreign ones also. He advocates the publication of series restricted to certain groups. These views must meet the approval of the majority of mycologists.

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[1] Eug. Warming, Symbolae ad floram Brasiliae Centr. cognosc. Particula XXXIV. Saertryk af Vidensk. Meddel. fra Naturhist. Forening, 1890. Copenhagen.